

# Cystic Fibrosis Research News

**Title:**

Longer term follow-up of abdominal symptoms (CFAbd-Score) after initiation of Elexacaftor / Tezacaftor / Ivacaftor in adults with cystic fibrosis

**Lay Title:**

Improvements in tummy and bowel symptoms after short and longer term Elexacaftor / Tezacaftor / Ivacaftor therapy (ETI)

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**What was your research question?**

We and others have shown that overall abdominal symptoms improve in the short term after starting Elexacaftor / Tezacaftor / Ivacaftor therapy (ETI) therapy. We wanted to know if this improvement persisted in the longer term.

**Why is this important?**

The underlying defect that causes cystic fibrosis (CF), as well as the use of drugs, such as antibiotics, have a profound effect on the gut, giving rise to troublesome abdominal symptoms. New modulator therapies, such as ETI therapy, target the underlying protein defect and often result in fewer antibiotics. Given that tackling troublesome abdominal has been identified as a key research priority for people with CF (pwCF), we wanted to understand more about the extent to which abdominal symptoms improve with longer term ETI use

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## What did you do?

We investigated abdominal symptoms in adults with CF (awCF) using a validated abdominal symptom questionnaires called the CFAbd-Score. The scoring system looks at five different aspects of gut symptoms including pain, gastroesophageal reflux-disease, disorders of bowel movement, disorders of appetite and the impact of gut symptoms on quality of life. We analysed the difference in abdominal symptoms before starting ETI and after  $\leq 1.5$  years (time point 1) and 2-4 years of ETI therapy (time point 2).

## What did you find?

Repeated abdominal questionnaires from 68 participants were analysed. After starting ETI therapy, total CFAbd-Scores significantly improved with both short and longer term ETI treatment (time points 1 and 2). A significant improvement in disorders of appetite and quality of life was only seen at time point 1 ( $\leq 1.5$  years of ETI therapy). In contrast, significant improvements in disorder of bowel movements were only seen after 2-4 years of ETI therapy (time point 2). Gastroesophageal reflux-disease scores were significantly lower at both time points after starting ETI therapy.

## What does this mean and reasons for caution?

While there was an overall improvement in abdominal symptoms after ETI, there were differences in the level of improvement according to the length of time on ETI therapy. Potential explanations for this include the relatively small number of people studied, altered perceptions of symptoms over time, adherence to medications and changes in diet. Larger trials are needed to see if symptoms further improve with longer term therapy.

## What's next?

Further work is needed to understand the underlying causes of abdominal symptoms in CF. Research is ongoing to investigate how ETI, diet and reduced antibiotic exposure can improve gut function and the balance of gut microorganism, potentially key drivers of GI symptoms.

## Original manuscript citation in PubMed

<https://pubmed.ncbi.nlm.nih.gov/39814671/>